

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

Alexandria Division

VIRGINIA INNOVATION SCIENCES, INC.,

Plaintiff,

V.

AMAZON.COM, INC.,

Defendant.

Civil No. 1:16-cv-00861

Hon. Liam O'Grady

MEMORANDUM OPINION & ORDER

This matter comes before the Court on cross motions for summary judgment by Plaintiff Virginia Innovation Sciences (“VIS”) and Defendant Amazon.com (“Amazon”). The Court heard arguments on these motions on October 27, 2017. *See* Dkt. 196. In light of those arguments, and having reviewed the pleadings, the Court **GRANTS** Amazon’s Motion for Summary Judgment (Dkt. 150) and **DENIES** VIS’s Motion for Summary Judgment (Dkt. 157).

I. BACKGROUND

VIS initially brought suit in this Court on July 5, 2016, alleging patent infringement of ten separate patents. In response, Amazon filed a motion to dismiss the infringement claims relating to eight of the patents. *See* Dkt. 21. They were: U.S. Patent No. 7,899,492; U.S. Patent No. 8,050,711; U.S. Patent No. 8,903,451; U.S. Patent No. 8,948,814; U.S. Patent No. 9,118,794; U.S. Patent No. 8,712,471; U.S. Patent No. 9,286,853 and U.S. Patent No. 9,355,611. The Court granted Amazon's motion in full on January 5, 2017, finding that the entire family of patents was directed to patent-ineligible subject matter under 35 U.S.C. § 101. *See* Dkt. 58. The Court entered final judgment on that order, and VIS appealed the Court's ruling to the Federal

Circuit. On August 18, 2017, the Court issued a Memorandum Opinion and Order as to the construction of disputed claim terms in the ‘398 patent, the ‘844 patent, and the ‘140 patent (eleven terms total). *See* Dkt. 139. The Court provided a final construction for each disputed term. On September 21, 2017, both parties filed Motions for Summary Judgment. *See* Dkt. 150; Dkt. 157. The Court heard arguments on these motions on October 27, 2017. *See* Dkt. 196.

II. LEGAL STANDARD

Summary judgment is appropriate when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). “A genuine issue of material fact exists where, after reviewing the record as a whole, a court finds that a reasonable jury could return a verdict for the nonmoving party.” *McAirlaids, Inc. v. Kimberly-Clark Corp.*, 756 F.3d 307, 310 (4th Cir. 2010). “It is an axiom that in ruling on a motion for summary judgment, the evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor.” *Id.* (alteration omitted) (quoting *Tolan v. Cotton*, 134 S. Ct. 1861, 1863 (2014) (per curiam)) (internal quotation marks omitted). Although the Court “must draw all reasonable inferences in the light most favorable to the nonmoving party, it is ultimately the nonmovant’s burden to persuade [the Court] that there is indeed a dispute of material fact.” *CoreTel Va., LLC v. Verizon Va., LLC*, 752 F.3d 364, 370 (4th Cir. 2014). That showing requires “more than a scintilla of evidence—and not merely conclusory allegations or speculation—upon which a jury could properly find in its favor.” *Id.*

The function of the Court at the summary judgment stage is not to determine the truth of a matter or to weigh credibility, but to determine whether there is any genuine issue of fact that can only properly be resolved by a finder of fact because it could reasonably be resolved in favor of either party. *JKC Holding Co. LLC v. Washington Sport Ventures, Inc.*, 264 F.3d 459, 465

(4th Cir. 2001) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). One of the principle purposes of the summary judgment rule is to isolate and dispose of factually unsupported claims or defenses. *Id.* (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 323-24 (1986)).

III. THE ‘398 PATENT

VIS alleges that Amazon Fire TV 1st Generation, Amazon Fire TV 2nd Generation, Amazon Fire TV Stick 1st Generation, Amazon Fire TV Stick 2nd Generation, and Amazon Fire TV Gaming Edition (collectively, “Fire TV and Stick products”) infringe the ‘398 patent’s claims 1, 2, 14, 16, 17, 20, 23, 24, 31, 35, 37, 42, 43, 47, 48, and 53. *See* Dkt. 158 at 12. Claims 1 and 14 are independent claims, and the remaining claims are dependent.

The ‘398 patent’s independent claim 1¹ is directed to a method by which (1) a multimedia content item² is received by a wireless terminal device (e.g., a cell phone) through a wireless communication network (e.g., a cellular network); (2) the multimedia content item is converted to a format that is compatible with a destination device (e.g., a television); (3) the multimedia content item is sent to the destination device; (4) it is sent by establishing a “predetermined channel” of communication with the destination device; (5) after establishing the channel, the multimedia content item is transported through that channel; so that (6) it may be displayed on the destination device in conjunction with a navigational command to the destination device for the predetermined channel. *See* Dkt. 151 at 8; Dkt. 139 at 8. Independent claim 14³ is directed to computer readable media containing code to perform the method for converting multimedia information received from a wireless device and transmitting it for display on a destination device. Dkt. 151 at 9.

¹ Claims 2, 16, 17, 20, 23, 24, 31 and 35 are dependent on claim 1.

² Multimedia content simply means content that has two forms of media—for example, music and video.

³ Claims 37, 42, 43, 47, 48 and 53 are dependent on claim 14.

Direct infringement requires a party to perform or use each and every step or element of a claimed method or product. *See BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007), *overruled on other grounds by Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012). VIS bears the burden of establishing infringement. *See Celotex*, 477 at 323. This means that VIS must make a showing sufficient to establish that the accused Amazon Fire TV and Stick products perform or use each step or element of the claimed method.

The ‘398 patent’s claims require receipt of a multimedia content item from a wireless terminal device that is destined for a destination device within the home location. *See* Dkt. 139 at 14. In its claim construction order, this Court construed “multimedia content item” to mean “the multimedia content in the format received by the wireless terminal device from the source.” *Id.* at 22. VIS has not shown that the accused Amazon Fire TV and Stick products meet either of the above claim limitations, that is: (1) receipt by a wireless terminal device of a multimedia content item “destined for a destination device” or (2) the multimedia content item received by the wireless terminal device is in the same format as the multimedia content item received by the destination device. Therefore, there is no genuine issue of material fact that the accused Amazon Fire TV and Stick products do not infringe the asserted ‘398 patent claims.

a. “Destined for a Destination Device”

The Court construed “destined for a destination device located within the home/designated location,” to mean “directed to a destination device within the home/designated location.” *Id.* at 14. The Court held that “it is clear that the term ‘destined’ in the context of the ‘398 patent requires some temporal significance; namely, that the destination device is determined *before* the media content is received by the mobile terminal device.” *Id.* at 11. To fall within the scope of the claims, the multimedia content cannot have the wireless terminal device

as its final destination. *Id.* The “destiny” of the multimedia content items, must be “defined by external sources . . . the destination device must be established as the destination before the media content is received.” *Id.* at 14. Thus if the free will of the cell phone’s user can dictate the destiny of the multimedia content item, then it is no longer within the scope of the claims. *Id.*

VIS contends the accused products infringe the ‘398 claims when a user receives multimedia content on her cell phone from a cellular network while a Miracast connection exists, at which point “a video streamed to a user device will end up on the TV without additional input or action by the user. Dkt. 158 at 13. But VIS does not identify what “external source” defines the destiny of the multimedia content item under its infringement theory. *See id.* at 13-14. Moreover, VIS’s own description suggests that it is the user, not an external source, which directs the destiny of the multimedia content item. *See* Dkt. 150 at 13 (“Much like an orchestra is directed by a conductor, here the multimedia content is ‘directed’ to the TV by the user device.”).

Additionally, the multimedia content item from the outside source cannot be “destined” for the television when it in fact never reaches the television. *See* Dkt. 151 at 19. The video from the outside source simply arrives for display at the cellphone, at which point a separate video is created of the cell phone screen and transmitted via Miracast to the Fire TV or Stick products. *Id.* at 21-22. The first video is generated by an outside source (e.g., YouTube) and the second video is generally located at the cell phone to reflect what appears on the cell phone screen. *Id.* This concept is explained further below.

b. “In the Same Format”

The asserted claims require “receiving a multimedia content item originated from a source located outside a home/designated location” and “received through a wireless communication network and sent from a wireless terminal device.” Dkt. 139 at 20; Dkt. 151 at

22; Ex. A. The Court construed “multimedia content item” to mean “the multimedia content in the format received by the wireless terminal device from the source.” Dkt. 139 at 22. The accused Fire TV and Stick Products are outside the scope of the ‘398 patent because Miracast does not transmit a multimedia content item “in the format received” by the wireless terminal device from the source.

The multimedia content item received by the Fire TV or Stick products is neither the same content nor the same format as the multimedia content item received from the outside source. Dkt. 151 at 23; Ex. F ¶ 11; Ex. G at 94:9-95:12. Instead, the Miracast transmits a *new video* (“the Miracast Stream”), which is different from the multimedia content item received from the outside source to the WTD/phone (“the Source Stream”). *See* Dkt. 151 at 18; Ex. H ¶ 70. This is because the multimedia content item sent via the Miracast stream is generated locally at the cell phone; the phone screen itself is forwarded, not the media stream from the outside source. *See* Dkt. 151 at 22-23.

Amazon identifies key three differences between the streams that underscore their separate nature: (1) the frame rate; (2) the resolution; and (3) the video display on the Fire TV or Stick Product, which includes *everything* on the phone screen. *See id.* at 23-26. While the frame rate of videos downloaded from the internet may have varying frame rates, Miracast always samples the cell phone screen at 30 frames per second, “producing a new video stream with a different format than the format of the video received from the source.” *Id.* at 25. The resolution of the multimedia content item transmitted using Miracast depends on the cell phone itself, regardless of the resolution of the multimedia content item received by the cell phone from the source. *Id.* at 25; Ex. F ¶ 11. Thus a video received by a user’s cell phone may have a resolution of 480p, for example, but the video transmitted by the cell phone to the destination device via

Miracast may have a resolution of 1080p. *See id.* Finally, the video display itself includes everything on the phone screen, not only the original multimedia content item received from the outside source. *See* Dkt. 151 at 24, Figs. 1A, 1B, 2A, 2B (showing example images).

VIS argues that “nothing prohibits additional information being included with the original multimedia content item,” and claims that because the “underlying data for the multimedia content is the same,” the multimedia content item itself should be considered the same. Dkt. 158 at 15. VIS further contends that the accused Fire TV and Stick products receive the same media as received by the wireless terminal device from the source because the two streams use the same video compression algorithms, or the H.264 and AAC “formats.” Dkt. 169 at 14-15. But these “codecs,” or algorithms for compressing and decompressing data for transmission, are not formats of multimedia content; they are a way to describe the steps that can be performed to multimedia content for transmission. *See* Dkt. 151 at 26; Ex. G at 25:1-7; 97:20-98:21. The Court’s construction requires that the multimedia content items themselves be the same, not the methods of their transmission. *See* Dkt. 139 at 20-22; Dkt. 172 at 9. VIS has thus failed to show that the accused Amazon Fire TV and Stick Products directly infringe the ‘398 patent claims.

Because VIS has failed to establish direct infringement, VIS cannot establish contributory or induced infringement. *See Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010); *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111, 2117 (2014) (“[W]here there has been no direct infringement, there can be no inducement of infringement”). VIS has not identified any third party who actually used their cell phone to stream content received from their cellular network to their accused Fire TV or Stick device to view the content on a television. *See* Dkt. 158 at 15-21; Dkt. 169 at 12-17; Dkt. 176 at 6-15; Dkt. 151 at 28; Ex. H ¶ 63; Ex. K at

114:20-115:4; 119:23-120:20; 123:12-17. For these reasons, the Court grants summary judgment in Amazon's favor and finds no infringement of the '398 patent.

IV. THE '844 PATENT

Amazon asks the Court to rule on the validity of the '844 patent. *See* Dkt. 151 at 30. VIS has stipulated that Amazon does not infringe the '844 patent under the Court's claim construction, reserving its right to appeal. *Id.* at n.7; Dkt. 169 at 5. Additionally, Amazon raised invalidity as an affirmative defense, not a counterclaim, and courts have dismissed requests for summary judgment on the affirmative defense of invalidity where infringement was not at issue. *See MiTile, Ltd. v. Hasbro, Inc.*, 984 F. Supp. 2d 525, 535 (E.D. Va. 2013) (dismissing as moot defendant's motion for summary judgment on its affirmative defenses of invalidity and lack of willfulness, and explaining, "Having found no literal or equivalent infringement, the Court need not answer the question of whether Defendant has valid defenses to Plaintiff's infringement claim"). Therefore the Court will not address the validity of the '844 patent.

V. THE '140 PATENT

The '140 patent⁴ is directed to securely processing credit card payments for online purchases by switching the user from a merchant server to a payment server. Dkt. 59 at 7-8; Dkt. 151 at 7. The patent provides for a system that allows users to purchase goods on the internet through a secure payment server. In the system, the user sends a message that she wants to buy an item from a merchant website. Once the purchase request has been made, the buyer is "shifted" from the merchant site to the secure payment server. After the buyer is shifted to the secure payment server, the server performs the standard functions which would otherwise have been performed by the merchant server (receiving credit card information over an encrypted connection which transmits the payment information to the acquiring bank for payment

⁴ The '140 patent is a re-issue from U.S. Patent No. 6,618,705. Dkt. 139 at 44.

processing, and confirming the transaction through the merchant server). The point of the ‘140 patent is to switch the communication channel after the buyer decides to make a purchase. Dkt. 139 at 47. VIS accuses Amazon Pay of infringing claim 17 of the ‘140 patent. Dkt. 176 at 15.

VIS describes the invention as focused on “providing enhanced security to a computer system by performing a number of steps to securely process credit card payment information,” and explains the patent’s inventive concept as the limitation “the buyer has been switched.” Dkt. 169 at 21, 25-26. At the claim construction stage, the Court noted that the ‘140 patent lacked detail regarding the shift between servers. Dkt. 139 at 46. Now, having reviewed the summary judgment pleadings and heard oral arguments on the motions, the Court finds that this is still the case; VIS has not presented sufficient evidence to show that the ‘140 patent discloses a means of accomplishing switching from the website listing the items to a website supported by the payment server. *See* Dkt. 176 at 20 (repeatedly noting that the ‘140 patent explained that the buyer “is switched,” without explaining how the switch occurs); Dkt. 151 at 14; Ex. C at 4:33-39, 5:37-40, 7:66-8:5; 8:45-51; Dkt. 139 at 46-47. Therefore it fails under 35 U.S.C. § 101.

The Supreme Court decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014) sets forth the framework for determining a patent’s eligibility under § 101. Under *Alice*’s two step inquiry, the Court first determines whether the patents at issue are directed to an abstract idea, law of nature, or natural phenomenon. *Id.* at 2350. If they are not directed to one of these excepted classes of subject matter, the inquiry ends. *Id.* If their focus is on one of these categories, however, the court proceeds to the second step, where it considers the elements of each claim both individually and as an ordered combination to determine whether the additional elements provide an inventive concept that ensures the patent amounts to “more than a drafting effort designed to monopolize the [abstract idea] itself.” *Id.* at 2350-51 (internal citations

omitted). If the claims do not sufficiently narrow the scope of the patent by providing this “inventive concept,” then the patent is rendered ineligible. *Id.* The Court therefore proceeds as directed.

a. *Alice* Step One

At the first step of *Alice*, the question is whether the claims focus on a specific means or method that improves the relevant technology, or are directed to a result or effect that itself is the abstract idea and merely invokes generic processes. *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (internal citations omitted). The Court must consider whether the “character as a whole” of the claims center on an abstract idea. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). In making this determination, courts must avoid describing the claims “at such a high level of abstraction” that the exceptions to Section 101 swallow the rule. *Id.* at 1337. Courts have held that an otherwise abstract idea is not rendered patent-eligible by reciting general purpose technological components. *Alice*, 134 S. Ct. at 2357 (holding that the introduction of a computer into the claims does not render the idea patent-eligible); *see also Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715-16 (Fed. Cir. 2014) (finding that claims which merely recited the abstract idea of using advertising as a currency as applied to the particular technological environment of the internet were not patent-eligible).

Independent claim 17 of the ’140 Patent recites “...wherein the credit card payment information is received after online communication of the buyer has been switched from the website listing the items to a website supported by the payment server, wherein the switching of the online communication of the buyer is after an indication from the buyer to buy the one or more of the items.” Dkt. 169 at 20. Similar language is found in independent claim 19. *Id.* Although VIS claims the result of securely processing a credit card transaction with a payment

server, the ‘140 patent does not disclose or claim any new or improved technology for achieving the result. Instead, the ‘140 patent claims a series of conventional steps performed in any online transaction: receiving and transmitting information. Because the focus of the claims of the ‘140 is directed to an abstract idea and merely invokes generic processes, the analysis proceeds to step two. *See Alice*, 134 S. Ct. at 2350.

b. Alice Step Two

At step two, the Court must determine whether the patent contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. *Id.* In other words, the Court must determine whether the claims remove the invention from the abstract and into the tangible world by patenting a means rather than an end. *See Electric Power Grp, LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (highlighting “an important common-sense distinction between ends sought and particular means of achieving them, between desired results (functions) and particular ways of achieving (performing) them”). A patent must claim a “technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way).” *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1351 (Fed. Cir. 2016).

Here, the claims of the ‘140 patent are not inventive. Claim 17 describes the element as “the buyer has been switched from the website listing the items to a website supported by a payment server.” *See* Ex. C at 8:1-3. VIS argues that “the fact that the buyer is switched distinguishes the claims from prior art.” Dkt. 169 at 21. VIS further contends that the claims are inventive because they provide for switching between communication channels with different security characteristics. *See id.* at 25 (asserting that the limitations are directed to a specific improvement in a payment processing system that allows merchants to utilize less secure servers

for listing products, and that switches the buyer from a website hosted by the less secure server to a website hosted by a more secure server to facilitate payment). But although VIS claims the “switching” result, VIS has not identified any new or improved technology for achieving it. *See* Dkt. 169 at 24-30; Dkt. 151 at 38. VIS has not explained *how* the switching is accomplished; VIS identifies no algorithm, computer program, or mechanism for performing the switch. *See* Dkt. 169 at 20-24; Dkt. 151 at 15; Ex. C; Dkt. 169 at 20-22. Indeed, VIS’s own expert, Dr. Melendez, could not identify how the buyer “is shifted.” Dkt. 169 at 22; Ex. 9 at 103:18-105:24. VIS has thus presented insufficient evidence for this Court to find that the switching is an inventive concept that provides an advantage over prior art.

Instead, the Court sees only an “abstract functional description devoid of technical explanation as to how to implement the invention,” such as has been found to fall outside of the inventive concept required by *Alice*. *See, e.g., In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2015). The Federal Circuit has invalidated similar patents directed to processing online financial transactions without providing any specific technical solution. *See, e.g., Intellectual Ventures I, LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015) (finding no inventive concept in claims directed to tracking financial transactions to determine whether they exceed a pre-set spending limit where the recited elements were all generic computer elements). For these reasons, the Court finds that the ‘140 patent is invalid for failure to identify a patentable subject matter under 35 U.S.C. § 101.

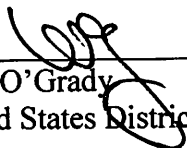
VI. CONCLUSION

For the reasons explained above, the Court hereby **GRANTS** Amazon’s Motion for Summary Judgment (Dkt. No. 150), and holds that (1) Amazon Fire TV and Stick products do not infringe the ‘398 patent; and (2) the ‘140 patent is invalid under 35 U.S.C. § 101. The Court

declines to rule on the validity of the '844 patent, as VIS has stipulated to Amazon's non-infringement. VIS's Motion for Summary Judgment (Dkt. 157) is **DENIED**.

IT IS SO ORDERED.

December 22, 2017
Alexandria, Virginia



Liam O'Grady
United States District Judge